DYNAMICS OF ROTYLENCHULUS RENIFORMIS POPULATIONS IN COTTON MONOCULTURE AND IN CROP ROTATIONS WITH CORN AND RICE W.D. Kirkpatrick Arkansas Cooperative Extension Service McGehee, AR R.J. Bateman J.D. Barham T.L. Kirkpatrick University of Arkansas

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<u>Abstract</u>

The reniform nematode has become a significant concern in cotton production in the Mississippi River Delta region of Arkansas. Soybean, as well as cotton, is a good host for this nematode, but corn and rice, both of which are becoming increasingly popular in many areas, are not hosts for this nematode. Reniform nematode population densities were evaluated at six-inch intervals vertically to a depth of 36 inches in fields with a history of cotton monoculture (at least five years), in soybeans following cotton, and in a cotton-rice-corn cropping sequence. Nematodes were detected throughout the vertical soil profile in all crops. Population densities were considerably lower after one year of either soybean or rice and in the corn following rice than where cotton was grown, but residual populations were detectible in all rotation regimes.